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IMPAIRED KIDNEY FUNCTION IS A DIABETES RISK EQUIVALENT IN PATIENTS WITH ESTABLISHED CORONARY ARTERY DISEASE

Poster Contributions
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Background: Type 2 diabetes mellitus (T2DM) is a paramount risk factor for cardiovascular disease, in particular among patients with established coronary artery disease (CAD). Similarly, chronic kidney disease (CKD) confers a high risk of cardiovascular events. We aimed at investigating the single and joint effects of T2DM and of CKD on cardiovascular risk in patients with angiographically proven CAD.

Methods: We prospectively recorded cardiovascular events over 10 years in a cohort of 1423 patients with angiographically proven CAD. CKD was defined as an estimated glomerular filtration rate (eGFR <60ml/min/1.73m².

Results: The risk of cardiovascular events was significantly higher in T2DM patients (n=437) than in non-diabetic subjects (39.1% vs. 28.7%; p <0.001) and also was higher in patients with CKD (n=246) compared to those with an eGFR ≥60ml/min/1.73m² (47.2% vs. 28.7%; p <0.001). When both, T2DM and CKD were considered, 841 subjects had neither T2DM nor CKD, 336 had T2DM but not CKD, 145 did not have diabetes but had CKD, and 101 had both diabetes and CKD. When compared with the event rate among patients with neither T2DM nor CKD (26.3%), event rates were significantly higher in patients with T2DM who did not have CKD (34.8%; p=0.007) and in non-diabetic patients with CKD (42.8%; p=0.020) and were highest in patients with both, T2DM and CKD (53.5%; p<0.001). Further, patients with both, T2DM and CKD were at a significantly higher event risk than those with T2DM but no CKD (p=0.011) and those without T2DM but with CKD (p=0.048). Event rates were similar in patients with T2DM but not CKD and in non-diabetic patients with CKD (p=0.798).

Conclusion: We here report the novel findings that CKD and T2DM contribute synergistically to cardiovascular event risk and that CKD is a T2DM risk equivalent in patients with established coronary artery disease.